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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,514

11/26/2003

Sim Dong-Hi

2060-3-92

1835

35884

7590

07/02/2010

LEE, HONG, DEGERMAN, KANG & WAIMEY

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EXAMINER

GHULAMALI, QUTBUDDIN

ART UNIT

PAPER NUMBER

2611

NOTIFICATION DATE

DELIVERY MODE

07/02/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/724,514	Applicant(s) DONG-HI ET AL.	
	Examiner Qutbuddin Ghulamali	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's request, 2/17/2010, for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Lee. The rejection follows.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103 Miyoshi(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 38-42 are rejected under 35 U.S.C. 103 (a) as being unpatentable Kim et al (US Pub. 2002/0004924) in view of Lee et al (US Pub. 2003/0060173).

Regarding claim 38, 42, Kim discloses an apparatus (method) for transmitting data using a plurality of antennas in a mobile communication system, comprising: a data block segmentation unit (422) segmenting a first data block into at least two second data blocks (segments a number of data blocks that could include a first block and other blocks) (page 5, section 0065); a Cyclic Redundancy Check (CRC) attachment unit (a CRC inserter 421) attaching a CRC to each of the at least two second data blocks (page 5, section 0065, 0066, 0067). Kim however, does not disclose a data block allocation unit allocating each of the at least two second data blocks and dummy bits to the plurality of antennas based on the

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received channel status information, wherein each of the at least two second data blocks is allocated to an antenna having good channel status and only the dummy bits are allocated to an antenna having bad channel status, wherein each of the plurality of antennas transmits the allocated second data block or dummy bits. However, Kim in a similar field of endeavor discloses allocating data groups (blocks) (page 2, section 0023) each of the at least two second data blocks and dummy bits to the plurality of antennas based on the received channel status information, wherein each of the at least two second data blocks is allocated to an antenna having good channel status (higher priority data through pair of antennas at good transmission status) and only the dummy bits (parity bits, lower priority data through a pair of antennas at poor transmission status) are allocated to an antenna having bad channel status, wherein each of the plurality of antennas transmits the allocated second data block or dummy bits (parity bits) (page 3, section 0029, 0034-0036; page 4, sections 0062; page 4-5, section 0067). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to assign dummy bits (parity bits or lower priority data bits) to antennas having bad channel status and assigning data to antenna having good channel status for transmitting data in the system of Kim because it can allow increased reception reliability of transmission data in a mobile communication as a whole. A person of ordinary skill in the art would be motivated to do so as it would increase an overall performance of a mobile communication system.

Regarding claims 39, 43, wherein dummy are predefined between apparatus and receiver is implicitly implied.

Regarding claims 40, 44, Kim discloses CRC is differently attached to each of the blocks (fig. 4).

Regarding claims 41, 45, Kim, discloses channel status information is a positive acknowledgement (ACK) or a negative acknowledgement (NACK) for each of the at least two second data blocks or the dummy bits which has been transmitted via each of the plurality of antennas (page 2, sections 0018, 0019, 0020, 0024).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutbuddin Ghulamali whose telephone number is (571)-272-3014. The examiner can normally be reached on Monday-Friday, 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QG.

June 17, 2010.

/Shuwang Liu/

Supervisory Patent Examiner, Art Unit 2611